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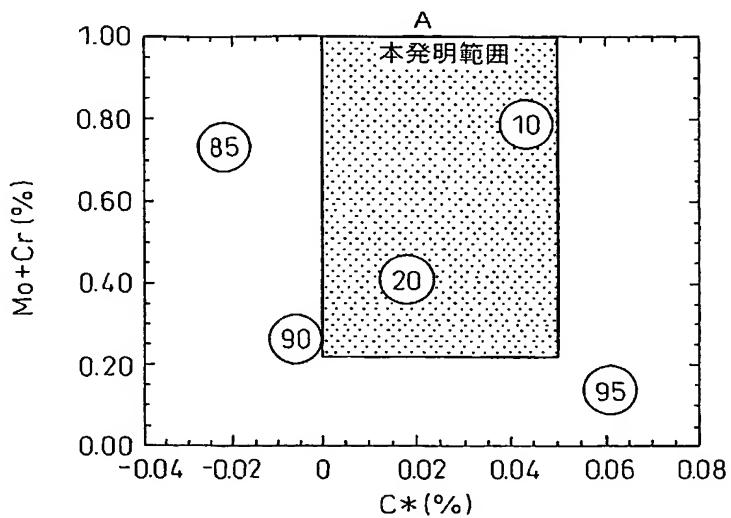
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(54) Title: HIGH STRENGTH STEEL SHEET EXHIBITING GOOD BURRING WORKABILITY AND EXCELLENT RESISTANCE TO SOFTENING IN HEAT-AFFECTED ZONE AND METHOD FOR PRODUCTION THEREOF

(54)発明の名称: 溶接熱影響部の耐軟化性に優れたバーリング性高強度鋼板およびその製造方法



A...SCOPE OF THE PRESENT INVENTION

(57) Abstract: A high strength steel sheet exhibiting good burring workability and excellent resistance to the softening in a heat-affected zone, characterized in that it has a chemical composition, in mass %: C: 0.01 to 0.1 %, Si: 0.01 to 2 %, Mn: 0.05 to 3 %, P \leq 0.1 %, S \leq 0.03 %, Al: 0.005 to 1 %, N: 0.0005 to 0.005 %, Ti: 0.05 to 0.5 %, Cr \leq 0.5 %, Mo \leq 0.5 %, with the proviso that $0 \% < C - (12/48Ti - 12/14N - 12/32S) \leq 0.05 \%$ and $Mo + Cr \geq 0.2 \%$, and the balance: Fe and inevitable impurities, and has a microstructure comprising ferrite or ferrite and bainite; and a method for producing the high strength steel sheet.

(57) 要約: 本発明は、溶接熱影響部の耐軟化性に優れたバーリング性高強度鋼板およびその製造方法を提供するもので、質量%にて、C: 0.01~0.1%、Si: 0.01~2%、Mn: 0.05~3%、P

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$\leq 0.1\%$ 、 $S \leq 0.03\%$ 、 $Al : 0.005 \sim 1\%$ 、 $N : 0.0005 \sim 0.005\%$ 、 $Ti : 0.05 \sim 0.5\%$ 、を含み、さらに $0\% < C- (12/48Ti-12/14N-12/32S) \leq 0.05\%$ 、さらに、 $Mo + Cr \geq 0.2\%$ 、かつ $Cr \leq 0.5\%$ 、 $Mo \leq 0.5\%$ 、を満たす範囲でC、S、N、Ti、Cr、Moを含有し残部がFe及び不可避的不純物からなる鋼であって、そのミクロ組織が、フェライト、またはフェライトおよびベイナイトからなることを特徴とする溶接熱影響部の耐軟化性に優れたバーリング性高強度鋼板。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/15275

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ C22C38/00, 38/38, 38/58, C21D9/46

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Kokai Jitsuyo Shinan Koho	1971-2004	Jitsuyo Shinan Toroku Koho	1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2002-363685 A (NKK Corp.), 18 December, 2002 (18.12.02), Claims; Par. Nos. [0009], [0024], [0044], [0049], [0060] to [0064] (Family: none)	1-9
X	US 2002/162613 A1 (KOBE STEEL, LTD.), 07 November, 2002 (07.11.02), Claims & JP 2001-20039 A	2-5, 7, 9
A	JP 9-272923 A (NKK Corp.), 21 October, 1997 (21.10.97), (Family: none)	1-9

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not considered to be of particular relevance
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 "&" document member of the same patent family

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International application No.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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P,A	JP 2003-105446 A (NKK Corp.), 09 April, 2003 (09.04.03), (Family: none)	1-9